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Study of the Resource Utilization Management of Construction Waste

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Abstract

By deeply analyzing the current situation of resource utilization management system of construction waste, limiting influence of the current existing problems on the resource utilization of construction waste was pointed out. And then made a detailed summary of the management policies and analysis of the problems, and it improved the resource utilization management policies of construction waste.

Keywords: Construction waste; resource utilization; management; law; standard

1. The current situation of the resource utilization management of construction waste

In the terms of the resource utilization and disposal of construction waste, because of the sectored fragmentation, the management department and improving department separate, without direct contact and overall coordination, which seriously effects the developing of resource utilization. Municipal environmental protection which is responsible for the disposal of municipal refuse mainly aims to transporting and disposing construction waste, lacking of economic motivate which limiting the quantity reduction and resource utilization development; recovery is in the charge of trade department and supply and marketing society meanwhile resource comprehensive reusing is in the charge of national development and reform commission, without well coordinate. The support of assorted laws is imperfect. The cost of resource utilization enterprises is high, and lack of support policies, the market of recycled products are also atrophying gradually, so it's hard to maintain in the long run. Environmental legal operation department can't implement pollution control policy across the board due to the department division. Currently the relationship of relevant departments of resource utilization management of construction waste is shown in the Fig.1.

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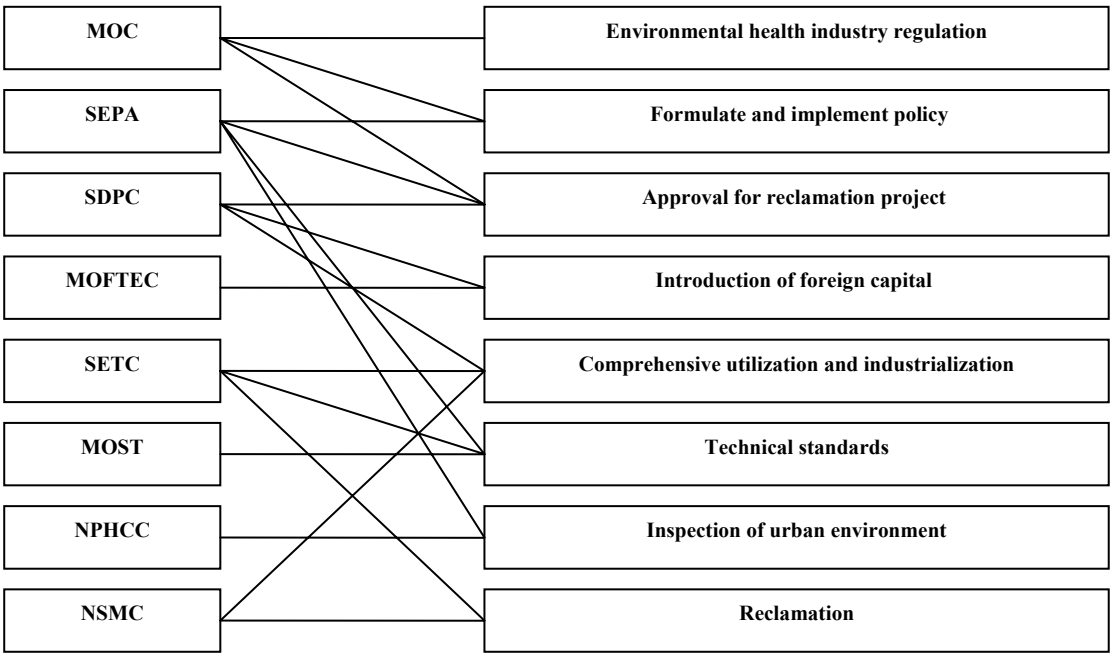

Figure 1Function relationship of relevant departments

(MOC: Ministry of Construction; SEPA: State Environmental Protection Administration; SDPC: State Development Planning Commission; MOFTEC: Ministry of Foreign Trade and Economic Cooperation; SETC: State Economic and Trade Commission; MOST: Ministry of Science and Technology; NPHCC: National Patriotic Health Campaign Commission; NSMC: National Supply and Marketing Cooperation)

2. Current management situation of construction waste resource utilization

At present, the management policies of construction waste resource utilization at home are as follows:

（1）《The catalogue of integrated utilization of resources》（carried out from 19th Mar. 2004）

《The catalogue of integrated utilization of resources》 which was revised in 2003 richened on the resource utilization project. The revise reflected how much our country pay attention to resource utilization

（2）《The Ministry of Finance state taxation administration the notice about the vat policies of some resources resource utilization and other products》mentioned that the added-value tax on some new type walling material would be cut down by half since 1st Jan.

（3）《Income tax law of the people's republic of china for enterprises》（carried out from 1st Jan. 2008）

The 27th law says that the enterprises income from qualified projects which are environmental and energy-efficient will be immune from income tax. The 33rd law says that the enterprises income from the qualified projects which make integrated utilization of resources can be reduced during the calculation of taxable income.

（4）《Enforcement regulation of income tax law of the people's republic of china for enterprises》（carried out from 1st Jan. 2008）

The 88th law says that the qualified projects which are environmental and energy-efficient mentioned in the 27th law include public sewerage treatment, public waste treatment, comprehensive development and application of bio gas, transformation of energy conservation and emission reduction technologies, and desalination of sea water and so on. The detail conditions and range are formulated by relevant departments of the state council. The enterprises which undertake environmental and energy-efficient projects are immured from business income taxes from 1st to 3rd years since the first income, and will enjoy an half cut of business income taxes from 4th to 6th years.

3. Analyze the problems of resource utilization of construction waste

By analysis of the specific case mentioned above, the current bottleneck problems of construction waste utilization in Beijing are as follows:

3.1 Imperfection of relevant laws

To resource utilization of urban construction waste, the current laws and regulations in Beijing are vary imperfect, and relevant contact about construction waste resource utilization, the rate of recycle utilization and the bans on landfill haven't been embodied in current regulations. It leads to directly transferring the construction waste to suburban and countryside, landfill in simple ways without any disposal. Developed counties such as the Occident, Japanese have studied this aspect since long time ago and made some regulations in the ways of law, for example, 《Super fund law》 in America says that any enterprise producing industrial waste must take proper disposal and must pouring arbitrarily. 《promotion law of resource reusing》 set by Japanese mentions that in the public projects, when there is a distance between job site and resource utilization facilities the economy is ignored, the waste must be transformed to the resource utilization facilities. This regulation made the construction waste resource utilization had an obvious affect.

3.2 Insufficiency of scientific input, lack of technical specification and product quality standard

In a long time, scientific input in our country has been insufficient which made corresponding technical standards couldn't be set up. For example, the structure, intensity, and other indexes which is responsible of resource utilization of urban construction waste, and method, and safety parameters of substitution and so on. Because there is some difference between construction waste and raw material, how to use properly and effectively is the first problem. Study of this aspect is the fundamental guarantee of the proper, wide use of construction waste.

3.3 Lack of support policies

Many countries have achieved construction waste resource utilization, and turned them to energy. Until now our country hasn't carry out the job and lack policy guide on the resource utilization of construction waste. For the speed up of urban and rural development, the request of construction materials and production of construction waste both have rapid upward trend. From either the aspects of resource utilization or environmental protection, the government is supposed to carry out this job to improve Chinese management of construction waste and make the economic construction sustainable development.

3.4 Lack of economic incentives policies

To make resource utilization come true, on one hand we should make the contractors more responsible and let resource utilization their conscious activity by propaganda and education; on the other hand some other methods should be taken to promote resource utilization such as rise the disposal cost of construction waste, to achieve the purposes by economic levers.

At present, charging standards is 1.5 Yuan per ton, and it is hard to incentive enthusiasm of resource utilization. Besides the sale price of twice-laid stuff is higher than raw material which resulted in a narrow market. So increasing the charging can not only incentive the enthusiasm of contractors, but also apply the charging to the enterprises of construction waste resource utilization.

In addition, the charging standards should be at different stages, for example to the classified waste the charging should be lower, and to unclassified waste should be higher. It can incentive the source separation and collection of construction waste.

4. System analysis of construction waste resource utilization

Through above deep analysis of management system and management policy of construction waste resource utilization and the relationship of relevant subjects, we set up resource utilization chain to provide the reference to the policy formulation. The specific is shown as Fig. 2.

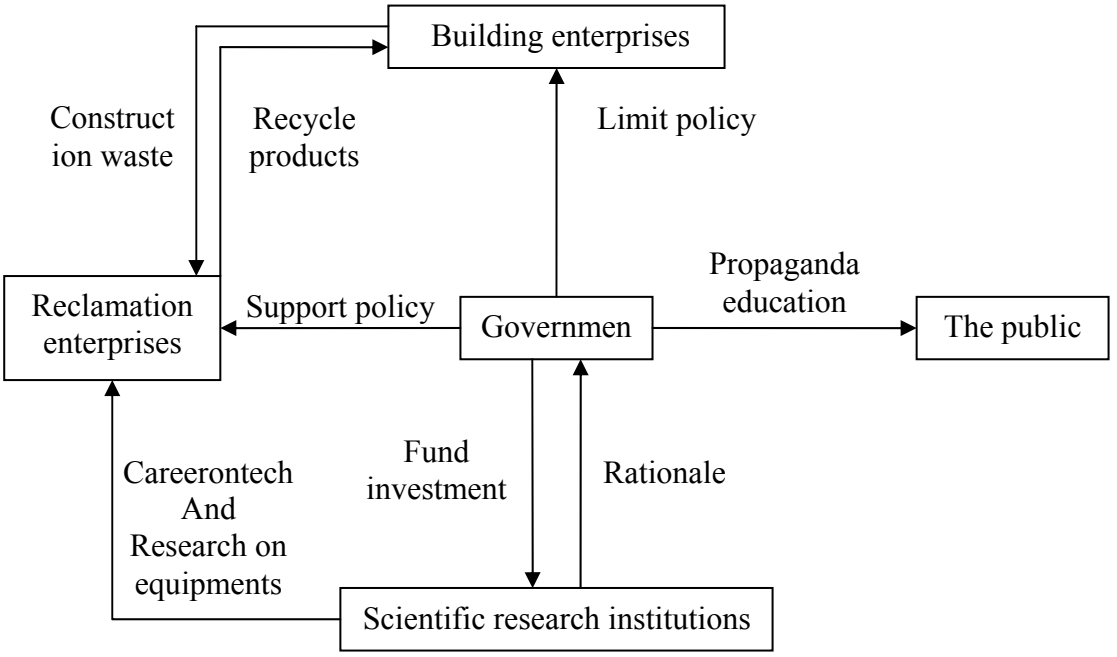

Figure 2 System analysis of construction waste reclamation

From the Fig.2, we can know that the government should be at the heart in the resource utilization.

This is because resource utilization of construction waste is a kind of non-profit business and it can't be without the support from the government. Besides, government is supposed to support out of the social and environmental benefits, the specific is as follows:

（1）There are two subjects of the main body of construction waste resource utilization: the one is building enterprises or contractor, they are not only the producer of construction waste, but also the user of recycle products; the other one is the resource utilization enterprises of construction waste, they are the processor of the construction waste and the producer of recycle products.

（2）Firstly under the intervention of the government, building enterprises or contractor interact with the resource utilization enterprises of construction waste and build up a chain of construction waste resource utilization. In one side, under the limit policies building enterprises or contractor transfer the construction waste to the enterprises of construction waste resource utilization; in the other side the enterprises of construction waste resource utilization sold the recycle products to the building enterprises or contractor with the support policies and support technique from scientific research institutions.

（3）As the decider, apart from the direct intervention to construction waste resource utilization, other methods are also needed. First, the government should increase the investment to scientific research institutions to improve the study of construction waste resource utilization. This is mainly reflected on the research and development, and the research results are directly applied to the resource utilization enterprises as technical support. Secondly, scientific research institutions should provide reference for the government. For example, operate standards of disposal of construction waste resource utilization and the quality standards of recycle products should be set up to be in favor of the supervision and control from the government.

（4）The government should increase the propaganda education to the public. For example, eliminate misunderstand of the pubic on recycle products though publicizing knowledge of construction waste resource utilization; environmental awareness should also be increased to incentive the enthusiasm of construction waste resource utilization. All these can strengthen the acceptation of recycle products to incentive the request and lead to a great social benefit such as the improving of living environment and the saving of land-using from piling or landfill construction waste and so on.

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